

Appendix C

Metropolitan Council Functional Classification Criteria

Functional Classification System Criteria for Principal Arterials

Criterion	Principal Arterial			
	Freeway		Other Principal Arterial	
	Urban	Rural	Urban	Rural
Place Connections	Interconnect the metro centers and regional business concentrations, important transportation terminals and large institutional facilities within the MUSA (See Figure F-1).	Connect the MUSA with urban areas and major cities in Minnesota and other states.	Interconnect the metro centers and regional business concentrations, important transportation terminals and large institutional facilities within the MUSA.	Connect the MUSA with major cities in Minnesota and other states.
Spacing	Fully developed area: 2-3 miles. Developing area: 3-6 miles.	Permanent Rural and Agricultural Areas: 6-12 miles (radial only).	Fully developed area: 2-3 miles. Developing area: 3-6 miles.	Permanent Rural and Agricultural Areas: 6-12 miles (radial only).
Management	Maintain at least 40-mph average speed during peak-traffic periods.	Retain ability to meet urban speed objective if and when area urbanizes.	Maintain at least 40-mph average speed during peak-traffic periods.	Retain ability to meet urban speed objectives if and when area urbanizes.
System Connections and Access Spacing*	To other Interstate freeways, other principal arterials and selected minor arterials. Connections between principal arterials should be of a design type that does not require vehicles to stop. Access at distances of 1-2 miles.	To other Interstate freeways, principal arterials, selected minor arterials and major collectors. Access at distances of 2-6 miles.	To Interstate freeways, other principal arterials, selected minor arterials and selected collectors. Connections between principal arterials should be of a design type that does not require vehicles to stop. Intersections should be limited to one-half mile with 1-2 miles desired.	To Interstate freeways, other principal arterials, selected minor arterials and selected major collectors. Intersections should be limited to several miles.
Trip-Making Service	Trips greater than 8 miles with at least 5 continuous miles on principal arterials. Express transit trips.		Trips greater than 8 miles with at least 5 continuous miles on principal arterials. Express transit trips.	
Mobility vs. Land Access*	Emphasis is placed on mobility rather than land access. No direct land access should be allowed.	Emphasis is placed on mobility rather than land access. No direct land access should be allowed.	Greater emphasis is placed on mobility than on land access. Little or no direct land access within the urban area.	Greater emphasis is placed on mobility than on land access. Little or no direct land access.

* The key objective is stated under “Management” heading in this table.

Functional Classification System Characteristics for Principal Arterials

Characteristics	Principal Arterial			
	Freeway		Other Principal Arterial	
	Urban	Rural	Urban	Rural
System Mileage	Suggested limits for Interstate and other principal arterials at 5-10% of system.	Suggested limits for Interstate and other principal arterials at 2-4% of system.	See "Freeway."	See "Freeway."
Percent of Vehicle Miles Traveled	Suggested limits for Interstate and other principal arterials at 40-65% of system.	Suggested limits for Interstate and other principal arterials at 30-55% of system.	See "Freeway."	See "Freeway."
Intersections	Grade separated.	Grade separated.	Grade separated desirable. At a minimum, high-capacity controlled at-grade intersections.	Grade separated desirable. At a minimum, high-capacity controlled at-grade intersections.
Parking	None.	None.	None.	None.
Large Trucks	No restrictions.	No restrictions.	No restrictions.	No restrictions.
Management Tools	Ramp metering, preferential treatment for transit, interchange spacing.	Interchange spacing.	Ramp metering, preferential treatment for transit, access control, median barriers, traffic signal progression, staging of reconstruction, intersection spacing.	Interchange spacing, access control, intersection spacing.
Vehicles Carried	25,000 – 200,000	5,000 – 50,000	15,000 – 100,000	2,500 – 25,000
Posted Speed Limit	45 – 55 mph	55 – 65 mph	40 – 55 mph	Legal limit
Right-of-Way	300 feet	300 feet	100 – 300 feet	100 – 300 feet
Transit Accommodations	Priority access and movement for transit in peak periods where needed.	None.	Priority access and movement for transit in peak periods where possible and needed.	None.

Functional Classification System Criteria for Minor Arterials

Criterion	Minor Arterial (“A” or “B”)	
	Urban	Rural
Place Connections	Provide supplementary connections to metro centers and regional business concentrations within the MUSA. Provide interconnection of major traffic generators within the metro centers and regional business concentrations.	Connect the MUSA with cities and towns in Minnesota outside the Twin Cities region. Interconnect rural growth centers inside the Twin Cities region and comparable places near the Twin Cities region.
Spacing	Metro centers and regional business concentrations: $\frac{1}{4}$ - $\frac{3}{4}$ mile. Fully developed area: $\frac{1}{2}$ - 1 mile. Developing area: 1-2 miles.	Permanent Rural and Agricultural Areas: As needed, in conjunction with the major collectors, provide adequate interconnection of places identified in “Place Connections” criterion.
System Connections	To most Interstate freeways and other principal arterials, other minor arterials and collectors and some local streets.	To most Interstate freeways, and other principal arterials, other minor arterials and collectors and some local streets.
Trip-Making Service	Medium-to-short trips (2-6 miles depending on development density) at moderate speeds. Longer trips accessing the principal arterial network. Local and limited-stop transit trips.	
Management	Maintain the following minimum average speed during peak-traffic periods: Metro centers and regional business concentrations – 15 mph. Fully developed area – 20 mph. Developing area – 30 mph.	Retain ability to meet urban speed objectives if and when area urbanizes.
Mobility vs. Land Access*	Emphasis on mobility rather than on land access. Direct land access within the MUSA restricted to concentrations of commercial/industrial land uses.	Emphasis on mobility rather than on land access.

* The key objective is stated under “Management: heading in this table.

Functional Classification System Characteristics for Minor Arterials

Characteristics	Minor Arterial (“A” of “B”)	
	Urban	Rural
System Mileage	Suggested limits for principal arterials and minor arterials at 15-25% of system.	Suggested limits for principal arterials and minor arterials at 6-12% of system.
Percent of Vehicle Miles Traveled	Suggested limits for principal arterials and minor arterials at 65-80% of system.	Suggested limits for principal arterials and minor arterials at 45-75% of system.
Intersections	Traffic signals and cross-street stops.	Cross-street stops.
Parking	Restricted as necessary.	Restricted as necessary.
Large Trucks	Restricted as necessary.	Restricted as necessary.
Management Tools	Traffic signal progression and spacing, land access management/control, preferential treatment for transit.	Land access management/control.
Vehicles Carried Daily	5,000 – 30,000	1,000 – 10,000
Posted Speed Limit	35 – 45 mph	Legal limit.
Right-of-Way	60 – 150 feet	60 – 150 feet
Transit Accommodations	Preferential treatment where needed.	None.

Functional Classification System Criteria for Collectors and Local Streets

Criterion	Collector		Local	
	Urban	Rural	Urban	Rural
Place Connections	Interconnect neighborhoods and minor business concentrations within the MUSA. Provide supplementary interconnection of major generators within the metro centers and regional business concentrations.	Provide supplementary interconnection among rural growth centers inside the Twin Cities region and comparable places near the Twin Cities region.	Interconnect blocks within residential neighborhoods and land parcels within commercial/industrial developments.	
Spacing	Metro centers and regional business concentrations: 1/8 – 1/2 mile. Fully developed area: 1/4 - 3/4 mile. Developing area: 1/2 - 1 mile	Permanent Rural and Agricultural Areas: As needed in conjunction with minor arterials, to provide adequate interconnection of places identified in “Place Connections” criterion. In addition, minor collectors should be designated at an average spacing of not less than 4 miles.	As needed to access land uses.	As needed to access land uses.
System Connections	Sometimes to Interstate freeways and other principal arterials. To minor arterials, other collectors and local streets.	To minor arterials, other collectors and local streets.	To a few minor arterials. To collectors and other local streets.	To a few minor arterials. To collectors and local roads.
Trip-Making Services	Short trips (1-4 miles depending on development density) at low-to-moderate speeds. Longer trips accessing the arterial network. Local transit trips.		Short trips (under 2 miles) at low speeds. Longer trips accessing the collector or collector and arterial network.	
Mobility vs Land Access	Equal emphasis on mobility and land access. Direct land access predominantly to development concentrations.		Emphasis on land access, not on mobility. Direct land access predominantly to residential land uses.	Emphasis on land access, not on mobility. Direct land access predominantly to agricultural land uses.

Functional Classification System Characteristics for Collectors and Local Streets

Characteristics	Collector		Local	
	Urban	Rural	Urban	Rural
System Mileage	Suggested federal limitations: 5 – 10%.	Suggested federal limitations: 20 – 25%.	Suggested federal limitations: 65 – 80%.	Suggested federal limitations: 63 – 75%.
Percent of Vehicle Miles Traveled	Suggested federal limitations: 5 – 10%.	Suggested federal limitations: 20 – 35%.	Suggested federal limitations: 10 – 30%.	Suggested federal limitations: 5 – 20%.
Intersections	Four-way stops and some traffic signals.	Local street traffic should be required to stop.	As required.	As required.
Parking	Restricted as necessary.	Unrestricted.	Permitted as necessary.	Permitted as necessary.
Large Trucks	Restricted as necessary.	Restricted as necessary.	Permitted as necessary.	Permitted as necessary.
Management Tools	Number of lanes, traffic signal timing, land access management.	Land access management.	Intersection control, cul-de-sacs, diverters.	
Vehicles Carried Daily	1,000 – 15,000	250 – 2,500	Less than 1,000	Less than 1,000.
Posted Speed Limit	30 – 40 mph	35 – 45 mph	Maximum 30 mph	Maximum 30 mph
Right-of-Way	60 – 100 Feet	60 – 100 feet	50 – 80 feet	50 – 80 feet.
Transit Accommodations	Cross sections and geometrics designed for use by regular-route buses.	None.	Normally uses as bus routes only in non-residential areas.	None.